KCNJ10 Protein, Mouse (Cell-Free, His)

Cat. No.:	HY-P702343
Synonyms:	ATP-sensitive inward rectifier potassium channel 10; Inward rectifier K(+) channel Kir4.1; Potassium channel, inwardly rectifying subfamily J member 10
Species:	Mouse
Source:	E. coli Cell-free
Accession:	Q9JM63 (M1-V379)
Gene ID:	16513
Molecular Weight:	48.5 kDa

PROPERTIES

AA Sequence	M T S V A K V Y Y S Q T T Q T E S R P L V A P G I R R R R V L T K D G R S N V R M E H I A D K R F L Y L K D L W T T F I D M Q W R Y K L L L F S A T F A G T W F L F G V V W Y L V A V A H G D L L E L G P P A N H T P C V V Q V H T L T G A F L F S L E S Q T T I G Y G F R Y I S E E C P L A I V L L I A Q L V L T T I L E I F I T G T F L A K I A R P K K R A E T I R F S Q H A V V A S H N G K P C L M I R V A N M R K S L L I G C Q V T G K L L Q T H Q T K E G E N I R L N Q V N V T F Q V D T A S D S P F L I L P L T F Y H V V D E T S P L K D L P L R S G E G D F E L V L I L S G T V E S T S A T C Q V R T S Y L P E E I L W G Y E F T P A I S L S A S G K Y I A D F S L F D Q V V K V A S P S G L R D S T V R Y G D P E K L K L E E S L R E Q A E K E G S A L S V R I S N V
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add 5-50% of glycerol (final concentration). Our default final concentration of glycerol is 50%. Customers could use it as reference.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The KCNJ10 protein is potentially responsible for the potassium buffering action in glial cells within the brain. As an inward

rectifier potassium channel, it exhibits a greater tendency to allow potassium influx rather than efflux, and its voltage dependence is modulated by extracellular potassium concentrations. The inward rectification primarily results from the blockage of outward current by internal magnesium, and its function can be impeded by extracellular barium and cesium. In the kidney, KCNJ10, in conjunction with KCNJ16, facilitates basolateral K(+) recycling in distal tubules, a process critical for Na(+) reabsorption. Furthermore, KCNJ10 forms a heterodimer with Kir5.1/KCNJ16, essential for the localization of KCNJ16 to the basolateral membrane in kidney cells. Interactions with MAGI1, both individually and potentially as a heterodimer with KCNJ16, may contribute to KCNJ10/KCNJ16 potassium channel expression at the basolateral membrane in kidney cells. Additionally, KCNJ10 interacts with PATJ.

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